

Art Unit: 1600

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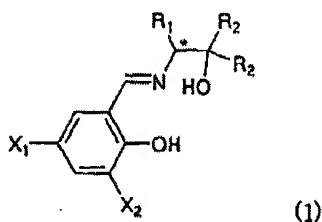
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## Claim 1 (original)

1. An optically active salicylideneaminoalcohol compound of formula (1):



wherein R<sub>1</sub> represents

an alkyl group which may be substituted with a group selected from an alkoxy group, an aralkyloxy group, an aryloxy group and cycloalkoxy group,

an aralkyl, aryl or cycloalkyl group all of which may be substituted with a group selected from an alkyl group, an alkoxy group, an aralkyloxy group, an aryloxy group and a cycloalkoxy group,

R<sub>2</sub> represents

an alkyl group, a cycloalkyl group, or

an aralkyl or phenyl group which may be substituted with a group selected from an alkyl group, an alkoxy group, an aralkyloxy group, an aryloxy group and a cycloalkoxy group,

when X<sub>1</sub> represents a nitro group, X<sub>2</sub> is a hydrogen atom,

when X<sub>1</sub> represents a chlorine atom, X<sub>2</sub> is a chlorine atom, and

when X<sub>1</sub> is a hydrogen atom, X<sub>2</sub> is a fluorine atom; and

the carbon atom denoted by " \* " is an asymmetric carbon atom having either an S or R configuration.

## Claim 2 (original)

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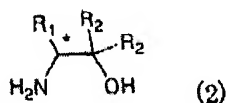
2. An optically active salicylideneaminoalcohol compound according to claim 1, wherein  $R_1$  and  $R_2$  are the same or different and independently represent an alkyl group, an aralkyl group, a phenyl group, a 2-methoxyphenyl group, a 2-tert-butoxy-5-tert-butylphenyl group or a 2-octyloxy-5-tert-butylphenyl group.

## Claim 3 (original)

3. A process for producing an optically active salicylideneaminoalcohol compound as defined in claim 1, which comprises

reacting

an optically active amino alcohol of formula (2):



wherein  $R_1$  represents

an alkyl group which may be substituted with a group selected from an alkoxy group, an aralkyloxy group, an aryloxy group and cycloalkoxy group,

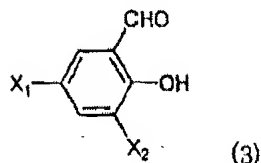
an aralkyl, aryl or cycloalkyl group all of which may be substituted with a group selected from an alkyl group, an alkoxy group, an aralkyloxy group, an aryloxy group, and a cycloalkoxy group,

$R_2$  represents

a hydrogen atom, an alkyl group, a cycloalkyl group or

an aralkyl or phenyl group which may be substituted with a group selected from an alkyl group, an alkoxy group, an aralkyloxy group, an aryloxy group and a cycloalkoxy group, and

the carbon atom denoted by " \* " is an asymmetric carbon atom having either an S or R configuration, with a 2-hydroxybenzaldehyde derivative of formula (3):



wherein when  $X_1$  represents a nitro,  $X_2$  is a hydrogen atom,

when  $X_1$  represents a chlorine atom,  $X_2$  is a chlorine atom, and

when  $X_1$  is a hydrogen atom,  $X_2$  is a fluorine atom.

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Claim 4 (original)

4. A process according to claim 3, wherein  $R_1$  and  $R_2$  are the same or different and independently represent an alkyl group, an aralkyl group, a phenyl group, a 2-methoxyphenyl group, a 2-tert-butoxy-5-tert-butylphenyl group or a 2-octyloxy-5-tert-butylphenyl group.

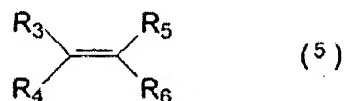
Claim 5 (original)

5. A chiral copper complex obtained by contacting a mono-valent or di-valent copper compound with an optically active salicylideneaminoalcohol compound as defined in claim 1 or 2.

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## Claim 6 (as amended)

6. (Amended) An adduct comprising a chiral copper complex as defined in claim 5 and a prochiral olefin of formula (5):



wherein R<sub>3</sub>, R<sub>4</sub>, R<sub>5</sub> and R<sub>6</sub> independently represent

a hydrogen atom,

a halogen atom,

a (C1-C10)alkyl group which may be substituted with a halogen atom or a lower alkoxy group,

a (C4-C8)cycloalkyl group,

an aryl group which may be substituted with a halogen atom or a lower alkoxy group, or

an alkoxy group; or

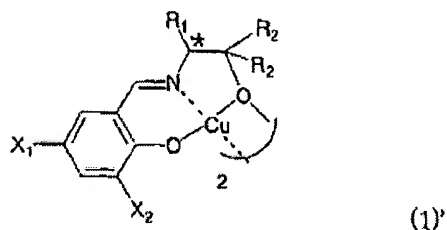
R<sub>3</sub> and R<sub>4</sub>, or R<sub>5</sub> and R<sub>6</sub> together form a cycloalkylene group having 2-4 carbon atoms, provided that one of R<sub>3</sub>, R<sub>4</sub>, R<sub>5</sub> and R<sub>6</sub> groups represents an alkenyl group which may be substituted with a halogen atom, an alkoxy group or an alkoxy carbonyl group, of which alkoxy may be substituted with a halogen atom or atoms, and

provided that when R<sub>3</sub> and R<sub>5</sub> are the same, R<sub>4</sub> and R<sub>6</sub> are not the same.

## Claim 7 (original)

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7. A method for producing a chiral copper complex of formula (1)':



wherein  $R_1$  and  $R_2$  are the same or different and independently represent an alkyl group, an aralkyl group, a phenyl group, a 2-methoxyphenyl group, a 2-tert-butoxy-5-tert-butylphenyl group, or a 2-octyloxy-5-tert-butylphenyl group,

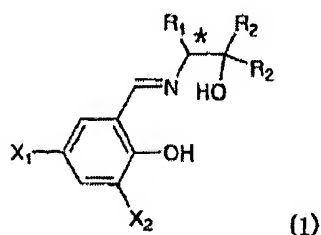
when  $X_1$  represents a nitro group,  $X_2$  is a hydrogen atom,

when  $X_1$  represents a chlorine atom,  $X_2$  is a chlorine atom, and

when  $X_1$  represents a hydrogen atom,  $X_2$  is a fluorine atom,

the carbon atom denoted by " \* " is an asymmetric carbon atom having either an S or R configuration,

which comprises contacting a di-valent copper compound, in an inert organic solvent, with a chiral salicylideneaminoalcohol compound of formula (1):



wherein  $R_1$ ,  $R_2$ ,  $X_1$ ,  $X_2$  and " \* " respectively have the same meaning as defined above.

#### Claim 8 (original)

8. A method according to claim 7, which further comprises subjecting the resulting solution to precipitation and collecting the precipitated crystals of said chiral copper complex of formula (1)'.

#### Claim 9 (original)

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9. A method according to claim 8, said precipitation is carried out by cooling the reaction solution or by adding an aliphatic hydrocarbon solvent.

Claims 10 and 11 (cancelled).

Claim 12. (NEW) A chiral copper complex obtained by the process consisting essentially of reacting a monovalent or divalent copper complex with an optically active salicylidene amino alcohol compound as defined in claim 1 or 2.